This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1. (Original) A method of accessing a database, the method comprising:
- (a) in response to a search request, generating a result set including identifications of a subset of a plurality of records in a database that match the search request;
- (b) ordering the identifications of the records in the result set using a user feedback parameter associated with each record in the result set; and
- (c) for each of the plurality of records, selectively updating the user feedback parameter associated therewith in response to detecting multiple accesses thereto by a user.
- 2. (Original) The method of claim 1, wherein selectively updating the user feedback parameter includes increasing a weight for the user feedback parameter associated with a first record in response to the number of times a user accesses the first record.
- 3. (Original) The method of claim 1, further comprising increasing a weight for the user feedback parameter associated with a first record in response to the first record being the most recently accessed record in the result set.
- 4. (Original) The method of claim 1, wherein the user feedback parameter associated with each record includes a plurality of weights, each weight associated with a keyword in the associated record, and wherein ordering the records in the result set using

the user feedback parameter associated with each record in the result set includes ordering the records using any weight associated with a keyword matching the search request.

- 5. (Original) The method of claim 4, wherein selectively updating the user feedback parameter includes increasing a first weight for the user feedback parameter associated with a first record in response to receipt of a search request matching a first keyword associated with the first weight.
- 6. (Original) The method of claim 1, wherein generating the result set includes accessing a search request data structure that includes a plurality of search request records, each including a search request parameter identifying a unique combination of keywords, and a result set parameter identifying a subset of records in the database that match the unique combination of keywords.
- 7. (Original) The method of claim 1, wherein ordering the identifications of the records in the result set using the user feedback parameter associated with each record in the result set includes:
 - (a) partitioning the result set into a plurality of relevance groups, with each relevance group including identifications of records having like relevancies to the search request; and
 - (b) sorting the identifications of records within each relevance group according to the user feedback parameters associated therewith.
- 8. (Original) The method of claim 1, wherein each record in the database includes a Uniform Resource Identifier (URL) that identifies a document stored on a computer network, wherein selectively updating the user feedback parameter includes selectively updating the user feedback parameter associated with a first record in the

database in response to detecting multiple accesses to the document stored at the URL associated with the first record.

- 9. (Original) The method of claim 8, wherein generating the result set includes generating at least one hypertext document including a plurality of hypertext links, each of which configured to access a document identified by a record in the result set.
- 10. (Original) The method of claim 9, wherein generating the hypertext document includes generating a script associated with at least one of the records in the result set, the script configured to generate a notification that the associated record has been accessed by a user, and wherein detecting multiple accesses to the document stored at the URL associated with the first record includes receiving the notification.
 - 11. (Original) An apparatus, comprising:
 - (a) a memory within which is resident a plurality of records from a database, each record associated with a user feedback parameter;
 - (b) a first program, resident in the memory, the first program configured to, in response to a search request, generate a result set including identifications of a subset of the plurality of records that match the search request, and to order the identifications of the records in the result set using the user feedback parameter associated with each record in the result set; and
 - (c) a second program, resident in the memory, the second program configured to, for each of the plurality of records, selectively update the user feedback parameter associated therewith in response to multiple accesses thereto by a user.

- 12. (Original) A program product, comprising:
- (a) a first program configured to, in response to a search request, generate a result set including identifications of a subset of a plurality of records in a database that match the search request, and to order the identifications of the records in the result set using a user feedback parameter associated with each record in the result set;
- (b) a second program configured to, for each of the plurality of records, selectively update the user feedback parameter associated therewith in response to multiple accesses thereto by a user; and
 - (c) a signal bearing medium bearing the first and second programs.
- 13. (Original) The program product of claim 12, wherein the signal bearing medium includes at least one of a recordable medium and a transmission type medium.
- 14. (Currently Amended) A method of accessing a database, the method comprising:
 - (a) in response to a search request, generating a result set including identifications of a subset of a plurality of records in a database that match the search request;
 - (b) ordering the identifications of the records in the result set using a user feedback parameter associated with each record in the result set, wherein ordering the identifications of the records in the result set using the user feedback parameter associated with each record in the result set includes:
 - (i) partitioning the result set into a plurality of relevance groups, with each relevance group including identifications of records having like relevancies to the search request; and

- (ii) sorting the identifications of records within each relevance group according to the user feedback parameters associated therewith; and
- (c) for each of the plurality of records in the database, selectively updating the user feedback parameter associated therewith in response to detecting that the record is the most recently accessed record in the result set.
- 15. (Original) The method of claim 14, wherein selectively updating the user feedback parameter includes increasing a weight for the user feedback parameter associated with a first record in response to the first record being the most recently accessed record in the result set.
- 16. (Original) The method of claim 14, further comprising increasing a weight for the user feedback parameter associated with a first record in response to the number of times a user accesses the first record.
- 17. (Original) The method of claim 14, wherein the user feedback parameter associated with each record includes a plurality of weights, each weight associated with a keyword in the associated record, and wherein ordering the records in the result set using the user feedback parameter associated with each record in the result set includes ordering the records using any weight associated with a keyword matching the search request.
- 18. (Original) The method of claim 17, wherein selectively updating the user feedback parameter includes increasing a first weight for the user feedback parameter associated with a first record in response to receipt of a search request matching a first keyword associated with the first weight.

19. (Original) The method of claim 14, wherein generating the result set includes accessing a search request data structure that includes a plurality of search request records, each including a search request parameter identifying a unique combination of keywords, and a result set parameter identifying a subset of records in the database that match the unique combination of keywords.

20. (Canceled)

- 21. (Original) The method of claim 14, wherein each record in the database includes a Uniform Resource Identifier (URL) that identifies a document stored on a computer network, wherein selectively updating the user feedback parameter includes selectively updating the user feedback parameter associated with a first record in the database in response to detecting that the document stored at the URL associated with the first record is the most recently accessed document identified in the result set.
- 22. (Original) The method of claim 21, wherein generating the result set includes generating at least one hypertext document including a plurality of hypertext links, each of which configured to access a document identified by a record in the result set.
- 23. (Original) The method of claim 22, wherein generating the hypertext document includes generating a script associated with at least one of the records in the result set, the script configured to generate a notification of when the associated record was accessed by a user, and wherein detecting that the document stored at the URL associated with the first record is the most recently accessed document identified in the result set includes receiving the notification.

中 海 清原 清 并

- 24. (Currently Amended) An apparatus, comprising:
- (a) a memory within which is resident a plurality of records from a database, each record associated with a user feedback parameter;
- (b) a first program, resident in the memory, the first program configured to, in response to a search request, generate a result set including identifications of a subset of the plurality of records that match the search request, and to order the identifications of the records in the result set using the user feedback parameter associated with each record in the result set, wherein the first program is configured to order the identifications of the records in the result set using the user feedback parameter associated with each record in the result set by partitioning the result set into a plurality of relevance groups, with each relevance group including identifications of records having like relevancies to the search request, and sorting the identifications of records within each relevance group according to the user feedback parameters associated therewith; and
- (c) a second program, resident in the memory, the second program configured to, for each of the plurality of records, selectively update the user feedback parameter associated therewith in response to detecting that the record is the most recently accessed record in the result set.
- 25. (Currently Amended) A program product, comprising:
- (a) a first program configured to, in response to a search request, generate a result set including identifications of a subset of a plurality of records in a database that match the search request, and to order the identifications of the records in the result set using a user feedback parameter associated with each record in the result set, wherein the first program is configured to order the identifications of the records in the result set using the user feedback parameter associated with each record in the result set by partitioning the result set into a

Page 8 of 17
Serial No. 09/356,241 (Appeal No. 2003-0706)
Amendment and Response dated September 28, 2004
Reply to Decision of Board of Appeals of August 31, 2004
IBM Docket RO999063
WH&E IBM/96
K:\u00e4bm/96Amendment After Decision.wpd

plurality of relevance groups, with each relevance group including identifications of records having like relevancies to the search request, and sorting the identifications of records within each relevance group according to the user feedback parameters associated therewith;

- (b) a second program configured to, for each of the plurality of records, selectively update the user feedback parameter associated therewith in response to detecting that the record is the most recently accessed record in the result set; and
 - (c) a signal bearing medium bearing the first and second programs.
- 26. (Original) The program product of claim 25, wherein the signal bearing medium includes at least one of a recordable medium and a transmission type medium.
 - 27. (Original) A method of accessing a database, the method comprising:
 - (a) in response to a search request, generating a result set including identifications of a subset of a plurality of records in a database that match the search request;
 - (b) ordering the identifications of the records in the result set using a user feedback parameter associated with each record in the result set, each user feedback parameter including a plurality of weights, each weight associated with a keyword, wherein ordering the identifications of the records includes using only those weights associated with keywords that match the search request; and
 - (c) for each of the plurality of records in the database, selectively updating at least one weight for the user feedback parameter associated therewith in response to user interaction with the record.

28. - 37. (Canceled)

38. (Previously Presented) A method of processing search requests submitted to a search engine, the method comprising:

- (a) receiving a search request that specifies a plurality of keywords;
- (b) accessing a search request data structure in response to the search request, the search request data structure including a plurality of search request records, each search request record including a search request identifier identifying a unique combination of keywords, and a result set identifier identifying a subset of a plurality of records in a database that match the unique combination of keywords, wherein accessing the search request data structure includes searching the search request data structure to locate a search request record including a search request identifier that matches the plurality of keywords in the search request;
- (c) generating a result set identifying the subset of records identified in the result set identifier in the located search request record;
- (d) for each of the plurality of records in the database, selectively updating a user feedback parameter associated therewith in response to user interaction with the record; and
- (e) ordering the identifications of the subset of records in the result set using the user feedback parameter associated with each record in the result set; wherein the result set identifier for each search request record further includes a copy of the user feedback parameter for each of the subset of records identified thereby, and wherein selectively updating the user feedback parameter includes updating each copy of the user feedback parameter in the search request data structure.

39. - 47. (Canceled)

48. (Previously Presented) The method of claim 27, wherein selectively updating at least one weight for the user feedback parameter includes, in response to user interaction with a first record, increasing any weight associated with the first record that is further associated with a keyword matching an active search request for the user.

513 241 6234 P.16/22

- 49. (Previously Presented) The method of claim 27, wherein selectively updating at least one weight for the user feedback parameter includes increasing a first weight for the user feedback parameter associated with a first record in response to detecting multiple accesses thereto by a user.
- 50. (Previously Presented) The method of claim 27, wherein selectively updating at least one weight for the user feedback parameter includes increasing a first weight for the user feedback parameter associated with a first record in response to the first record being the most recently accessed record in the result set.
- 51. (Previously Presented) The method of claim 27, wherein generating the result set includes accessing a search request data structure that includes a plurality of search request records, each including a search request parameter identifying a unique combination of keywords, and a result set parameter identifying a subset of records in the database that match the unique combination of keywords.
- 52. (Previously Presented) The method of claim 27, wherein ordering the identifications of the records in the result set using the user feedback parameter associated with each record in the result set includes:
 - (a) partitioning the result set into a plurality of relevance groups, with each relevance group including identifications of records having like relevancies to the search request; and
 - (b) sorting the identifications of records within each relevance group using the weights from the user feedback parameters associated therewith.
- 53. (Previously Presented) The method of claim 27, wherein each record in the database includes a Uniform Resource Identifier (URL) that identifies a document stored on a computer network, wherein selectively updating the user feedback parameter includes selectively updating at least one weight for the user feedback parameter

The state of the s

associated with a first record in the database in response to user interaction with the first record.

54. (Currently Amended) The method of claim <u>53</u> 33, wherein generating the result set includes generating at least one hypertext document including a plurality of hypertext links, each of which configured to access a document identified by a record in the result set.

55. (Previously Presented) An apparatus, comprising:

- (a) a memory within which is resident a plurality of records from a database, each record associated with a user feedback parameter;
- (b) a first program, resident in the memory, the first program configured to, in response to a search request, generate a result set including identifications of a subset of the plurality of records that match the search request, and to order the identifications of the records in the result set using the user feedback parameter associated with each record in the result set, wherein each user feedback parameter includes a plurality of weights, wherein each weight is associated with a keyword, and wherein the first program is configured to order the identifications of the records by using only those weights associated with keywords that match the search request; and
- (c) a second program, resident in the memory, the second program configured to, for each of the plurality of records, selectively update the user feedback parameter associated therewith in response to user interaction with the record.

56. (Previously Presented) A program product, comprising:

(a) a first program configured to, in response to a search request, generate a result set including identifications of a subset of a plurality of records in a database that match the search request, and to order the identifications of the

OCT-14-2004 10:59

- (b) a second program configured to, for each of the plurality of records, selectively update the user feedback parameter associated therewith in response to user interaction with the record; and
 - (c) a signal bearing medium bearing the first and second programs.
- 57. (Previously Presented) The program product of claim 56, wherein the signal bearing medium includes at least one of a recordable medium and a transmission type medium.
 - 58. 59. (Canceled).
- 60. (Previously Presented) The method of claim 38, wherein the result set identifier for each search request record further includes a list of record identifiers, each of which identifying a record in the associated subset of records, and each of which associated with the copy of the user feedback parameter for the associated record, the method further comprising ordering the list of record identifiers identified by the result set identifier of a first search request record based upon the copies of the user feedback parameters associated with the subset of records.
- 61. (Previously Presented) The method of claim 60, wherein the search request data structure comprises a table, wherein each search request record comprises an entry in the table, and wherein the result set identifier for each search request record comprises a linked list of record identifiers.

- 62. (Previously Presented) The method of claim 61, further comprising sorting the table entries responsive to frequency of access thereto.
 - 63. (Previously Presented) The method of claim 62, further comprising:
 - (a) adding a new entry to the table in response to receiving a search request not matching any existing entry in the table; and
 - (b) removing an entry from the table in response to a frequency of access therefor falling below a predetermined threshold.
 - 64. (Previously Presented) An apparatus, comprising:
 - (a) a memory within which is resident a search request data structure, the search request data structure including a plurality of search request records, each search request record including a search request identifier identifying a unique combination of keywords, and a result set identifier identifying a subset of a plurality of records in a database that match the unique combination of keywords;
 - (b) a program, resident in the memory, the program configured to, in response to a search request that specifies a plurality of keywords, search the search request data structure to locate a search request record including a search request identifier that matches the plurality of keywords in the search request, and to generate a result set identifying the subset of records identified in the result set identifier in the located search request record;

wherein the program is further configured to, for each of the plurality of records in the database, selectively update a user feedback parameter associated therewith in response to user interaction with the record; wherein the program is further configured to order the identifications of the subset of records in the result set using the user feedback parameter associated with each record in the result set; wherein the result set identifier for each search request record further includes a copy of the user feedback parameter for each of the subset of records identified thereby, and wherein the program is configured to

selectively update the user feedback parameter by updating each copy of the user feedback parameter in the search request data structure.

- 65. (Previously Presented) A program product, comprising:
- (a) a program configured to, in response to a search request that specifies a plurality of keywords, search a search request data structure to locate a search request record including a search request identifier that matches the plurality of keywords in the search request, the search request data structure including a plurality of search request records, each search request record including a search request identifier identifying a unique combination of keywords, and a result set identifier identifying a subset of a plurality of records in a database that match the unique combination of keywords, and the program further configured to generate a result set identifier in subset of records identified in the result set identifier in the located search request record; and
- (b) a signal bearing medium bearing the program; wherein the program is further configured to, for each of the plurality of records in the database, selectively update a user feedback parameter associated therewith in response to user interaction with the record; wherein the program is further configured to order the identifications of the subset of records in the result set using the user feedback parameter associated with each record in the result set; wherein the result set identifier for each search request record further includes a copy of the user feedback parameter for each of the subset of records identified thereby, and wherein the program is configured to selectively update the user feedback parameter by updating each copy of the user feedback parameter in the search request data structure.
- 66. (Previously Presented) The program product of claim 65, wherein the signal bearing medium includes at least one of a recordable medium and a transmission type medium.